

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Amended) A composition for use as an additive for fuels or lubricants comprising a reaction product of a treated amine and a compound selected from the group consisting of hydrocarbyl succinic anhydrides, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups, and copolymers of unsaturated acids and polyolefins, ~~and acid or ester functionalized hydrocarbon polymers,~~ wherein the reaction product is oil soluble and has a number average molecular weight ranging from about 900 to about 50,000 as determined by gel permeation chromatography, and wherein the treated amine comprises an aliphatic or aromatic amine containing at least one primary or secondary amino group reacted with acrylonitrile or at least one homologue thereof, followed by reduction to the primary amine,

with the proviso that if the aliphatic or aromatic amine is a hydroxyamine, the hydroxyamine is chosen from oligomers, polymers, aminoethylethanolamine, aminopropyldiethanolamine, partially propoxylated hexamethylene diamine, 3-amino-1,2-propanediol, tris(hydroxymethyl)aminomethane, and 2-amino-1,3-propanediol; and

with the further proviso that the aliphatic amine is chosen from aminoguanidine bicarbonate, diethylene triamine, triethylene tetramine, tetraethylene pentamine, pentaethylene hexamine and heavy polyamines.

2. (Previously Presented) The composition of claim 1, wherein the aliphatic or aromatic amine is reacted with one to five equivalents of acrylonitrile or one of its homologues, followed by reduction of the primary amine per primary or secondary amino group in the amine.

3. (Previously Presented) The composition of claim 1, wherein the amine is a substantially linear aliphatic amine.

4. (Previously Presented) The composition of claim 1, wherein the amine is an aromatic amine.

5. (Previously Presented) The composition of claim 1, wherein the reaction product comprises a hydrocarbyl-substituted succinimide derived from the treated amine and a hydrocarbyl-substituted succinic acid having a mole ratio of succinic acid to treated amine ranging from about 0.3:1.0 to about 12.0:1.

6. (Previously Presented) The composition of claim 1, wherein the reaction product comprises Mannich adducts derived from hydrocarbyl-substituted phenols, formaldehydes and treated amines.

7. (Previously Presented) The composition of claim 1, wherein the reaction product comprises a product derived from an ethylene-propylene copolymer and the treated amine.

8. (Previously Presented) The composition of claim 1, wherein the reaction product further comprises an untreated amine selected from the group consisting of aliphatic amines and aromatic amines.

9. (Previously Presented) A lubricant composition comprising an oil of lubricating viscosity and from about 0.1 to 10 wt. %, based on the total weight of the composition of the reaction product of claim 1.

10. (Previously Presented) A vehicle having moving parts and containing a lubricant for lubricating the moving parts, the lubricant comprising an oil of lubricating viscosity and from about 0.1 to 10 wt. %, based on the total weight of the lubricant composition, of the reaction product of claim 1.

11. (Previously Presented) An additive package for lubricants or fuels comprising a reaction product of claim 1 and a composition selected from the group consisting of hydrocarbyl succinic anhydrides reacted with an amine, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes and amines, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups reacted with amines, copolymers of unsaturated acids and polyolefins reacted with amines, and acid or ester functionalized hydrocarbon polymers reacted with amines, wherein the amines comprise untreated aliphatic or aromatic amines.

12. (Previously Presented) A lubricant composition comprising an oil of lubricating viscosity and from about 0.1 to 10 wt. %, based on the total weight of the lubricant composition, of the additive of claim 11.

13. (Previously Presented) A fuel composition comprising a hydrocarbyl fuel and from about 5 to about 200 pounds per thousand barrels of the composition of claim 1.

14. (Amended) A lubricant additive comprising a reaction product of a treated amine and a compound selected from the group consisting of hydrocarbyl succinic anhydrides, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups, and copolymers of unsaturated acids and polyolefins, ~~and acid or ester functionalized hydrocarbon polymers~~, wherein the reaction product is oil soluble and has a number average molecular weight ranging from about 900 to about 50,000 as determined by gel permeation chromatography, and wherein the treated amine comprises an aliphatic or aromatic amine containing at least one primary or secondary amino group reacted with acrylonitrile or one of its homologues, followed by reduction to the primary amine, with the proviso that if the aliphatic or aromatic amine is a hydroxyamine, the hydroxyamine is chosen from oligomers, polymers, aminoethylethanolamine, aminopropyldiethanolamine, partially propoxylated

hexamethylene diamine, 3-amino-1,2-propanediol, tris(hydroxymethyl)aminomethane, and 2-amino-1,3-propanediol; and

with the further proviso that the aliphatic amine is chosen from aminoquanidine bicarbonate, diethylene triamine, triethylene tetramine, tetraethylene pentamine, pentaethylene hexamine and heavy polyamines.

15. (Previously Presented) The lubricant additive of claim 14, wherein the reaction product further comprises an untreated amine selected from the group consisting of aliphatic and aromatic amines.

16. (Previously Presented) The lubricant additive of claim 14, further comprising a composition selected from the group consisting of hydrocarbyl succinic anhydrides reacted with amines, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes and amines, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups reacted with amines, copolymers of unsaturated acids and polyolefins reacted with amines, and acid or ester functionalized hydrocarbon polymers reacted with amines, wherein the amines comprise untreated aliphatic or aromatic amines.

17. (Previously Presented) The lubricant additive of claim 14, wherein the reaction product is a post treated reaction product.

18. (Previously Presented) A lubricant composition comprising an oil of lubricating viscosity and from about 0.1 to 10 wt. %, based on the total weight of the lubricant composition, of the lubricant additive of claim 14.

19. (Amended) A fuel additive comprising a reaction product of a treated amine and a compound selected from the group consisting of hydrocarbyl succinic anhydrides, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups, copolymers of unsaturated acids and polyolefins, ~~and acid or ester~~

~~functionalized hydrocarbon polymers~~, wherein the reaction product is oil soluble and has a number average molecular weight ranging from about 900 to about 50,000 as determined by gel permeation chromatography, and wherein the treated amine comprises an aliphatic or aromatic amine containing at least one primary or secondary amino group reacted with acrylonitrile or at least one homologue thereof, followed by reduction to the primary amine.

20. (Previously Presented) The fuel additive of claim 19, wherein the reaction product further comprises an untreated amine selected from the group consisting of aliphatic and aromatic amines.

21. (Previously Presented) The fuel additive of claim 19, further comprising a composition selected from the group consisting of hydrocarbyl succinic anhydrides reacted with amines, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes and amines, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups reacted with amines, copolymers of unsaturated acids and polyolefins reacted with amines, and acid or ester functionalized hydrocarbon polymers reacted with amines, wherein the amines comprise untreated aliphatic or aromatic amines.

22. (Previously Presented) The fuel additive of claim 19, wherein the reaction product is a post treated reaction product.

23. (Previously Presented) A fuel composition comprising a fuel and from about 5 to 200 pounds per thousand barrels of the lubricant additive of claim 14.

24. (Amended) A method of lubricating moving parts of a vehicle, the method comprising using as a lubricating oil for one or more moving parts of the vehicle a lubricant composition containing a lubricant and a lubricant additive, the lubricant additive including a reaction product of treated amine and a compound selected from the group consisting of hydrocarbyl succinic anhydrides, Mannich adducts derived from

hydrocarbyl-substituted phenols reacted with formaldehydes, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups, copolymers of unsaturated acids and polyolefins, ~~and acid or ester functionalized hydrocarbon polymers~~, wherein the reaction product is oil soluble and has a number average molecular weight ranging from about 900 to about 50,000 as determined by gel permeation chromatography, and wherein the treated amine comprises an aliphatic or aromatic amine containing at least one primary or secondary amino group reacted with acrylonitrile or a homologue thereof, followed by reduction to the primary amine, with the proviso that if the aliphatic or aromatic amine is a hydroxyamine, the hydroxyamine is chosen from oligomers, polymers, aminoethylethanolamine, aminopropyldiethanolamine, partially propoxylated hexamethylene diamine, 3-amino-1,2-propanediol, tris(hydroxymethyl)aminomethane, and 2-amino-1,3-propanediol; and with the further proviso that the aliphatic amine is chosen from aminoguanidine bicarbonate, diethylene triamine, triethylene tetramine, tetraethylene pentamine, pentaethylene hexamine and heavy polyamines.

25. (Previously Presented) The method of claim 24 wherein the vehicle includes an internal combustion engine having a crankcase and wherein the lubricant composition comprises a crankcase oil present in the crankcase of the vehicle.

26. (Previously Presented) The method of claim 24 wherein the lubricant composition comprises a drive train lubricant present in an automotive drive train of the vehicle.

27. (Previously Presented) The method of claim 24, wherein the reaction product includes an untreated amine selected from the group consisting of aliphatic and aromatic amines.

28. (Previously Presented) The method of claim 24, wherein the lubricant additive includes a composition selected from the group consisting of hydrocarbyl succinic anhydrides reacted with amines, Mannich adducts derived from hydrocarbyl-

substituted phenols reacted with formaldehydes and amines, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups reacted with amines, copolymers of unsaturated acids and polyolefins reacted with amines, and acid or ester functionalized hydrocarbon polymers reacted with amines, wherein the amines comprise untreated aliphatic or aromatic amines.

29. (Previously Presented) The method of claim 24, wherein the reaction product is a post treated reaction product.

30. (Amended) A method for lubricating moving parts comprising contacting the moving parts with a lubricant composition containing a lubricant and a lubricant additive, the lubricant additive comprising a reaction product of a treated amine and a compound selected from the group consisting of hydrocarbyl succinic anhydrides, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups, copolymers of unsaturated acids and polyolefins, and ~~acid or ester functionalized hydrocarbon polymers~~, wherein the reaction product is oil soluble and has a number average molecular weight ranging from about 900 to about 50,000 as determined by gel permeation chromatography, and wherein the treated amine comprises an aliphatic or aromatic amine containing at least one primary or secondary amino group reacted with acrylonitrile or homologue thereof, followed by reduction to the primary amine, with the proviso that if the aliphatic or aromatic amine is a hydroxyamine, the hydroxyamine is chosen from oligomers, polymers, aminoethylethanolamine, aminopropyldiethanolamine, partially propoxylated hexamethylene diamine, 3-amino-1,2-propanediol, tris(hydroxymethyl)aminomethane, and 2-amino-1,3-propanediol; and with the further proviso that the aliphatic amine is chosen from aminoguanidine bicarbonate, diethylene triamine, triethylene tetramine, tetraethylene pentamine, pentaethylene hexamine and heavy polyamines.

31. (Previously Presented) The method of claim 30 wherein the lubricant composition comprises a gear lubricant present in a gear box.

32. (Previously Presented) The method of claim 30, wherein the reaction product includes an untreated amine selected from the group consisting of aliphatic and aromatic amines.

33. (Previously Presented) The method of claim 30, wherein the lubricant additive includes a composition selected from the group consisting of hydrocarbyl succinic anhydrides reacted with amines, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes and amines, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups reacted with amines, copolymers of unsaturated acids and polyolefins reacted with amines, and acid or ester functionalized hydrocarbon polymers reacted with amines, wherein the amines comprise untreated aliphatic or aromatic amines.

34. (Previously Presented) The method of claim 30, wherein the reaction product is a post treated reaction product.

35. (Amended) A method for decreasing combustion chamber deposits and/or intake valve deposits in an engine comprising providing a fuel containing an additive comprising a reaction product of a treated amine and a compound selected from the group consisting of hydrocarbyl succinic anhydrides, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups, copolymers of unsaturated acids and polyolefins, and ~~acid or ester functionalized hydrocarbon polymers,~~ wherein the reaction product is oil soluble and has a number average molecular weight ranging from about 900 to about 50,000 as determined by gel permeation chromatography, and wherein the treated amine comprises an aliphatic or aromatic amine containing at least one primary or secondary amino group reacted with acrylonitrile or a homologue thereof, followed by reduction to the primary amine.



36. (Previously Presented) The method of claim 35, wherein the reaction product includes an untreated amine selected from the group consisting of aliphatic and aromatic amines.

37. (Previously Presented) The method of claim 35, wherein the diesel fuel includes a composition selected from the group consisting of hydrocarbyl succinic anhydrides reacted with amines, Mannich adducts derived from hydrocarbyl-substituted phenols reacted with formaldehydes and amines, ethylene-propylene copolymers grafted with ethylenically unsaturated carboxylic groups reacted with amines, copolymers of unsaturated acids and polyolefins reacted with amines, and acid or ester functionalized hydrocarbon polymers reacted with amines, wherein the amines comprise untreated aliphatic or aromatic amines.

38. (Previously Presented) The method of claim 35, wherein the reaction product is a post treated reaction product.

39. (Previously Presented) The lubricating composition of claim 9, wherein the composition has a sulfur content of less than 0.5 weight percent, a phosphorus content of less than 0.11 weight percent, and a sulfated ash content of less than 1.2 weight percent.